



PATIENT

Charley Bencoe

PRESENTING CLINICAL SIGNS

History: Suspect syncope. Grade 5/6 murmur.

SPECIES

Canine

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 25mm/s; 10mm/mV. The average heart rate is 120bpm (range 75-150bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. Occasional single APCs are seen. No VPCs, pauses or other dysrhythmias observed.

BREED

Miniature Poodle

ECG diagnosis: Normal sinus rhythm with respiratory variation. Occasional APCs.

SEX

Female Spayed

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of the mitral valve with prolapse into the left atrial lumen. severe mitral regurgitation with severe left atrial dilation. Mild LV diameter with adequate myocardial function. Normal LV wall thickness. Tricuspid valve appears normal with mild TR. Normal velocity. No obvious tamponade is appreciated at this time. Obvious tumor associated with the external surface of the RA/AV groove; 2.3 x 1.6cm in diameter. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities; laminar flow. No PI. No AI. Moderate volume pericardial effusion. No obvious pleural effusion.

AGE

11 years

WEIGHT

13.2lbs

CARDIAC CHART

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	4.6	3.0	NM	2.5	39	70	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	nm	1.4	0.96	6.0	3.0	4.1	2.5
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

Adapted from June Boon, Veterinary Echocardiography, 1998
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435
Hansson et al, Vet Rad and Ultrasound 2002
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995

IMAGING PERFORMED BY

Dana Alterman,
RDCS, LVT

HOSPITAL NAME

Eubank Animal Clinic

REFERRING VET

Dr. Pauly

INVOICE

31899

DATE

7/18/23



PATIENT

Charley Bencoe

SPECIES

Canine

BREED

Miniature Poodle

SEX

Female Spayed

AGE

11 years

WEIGHT

13.2lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Dana Alterman,
RDCS, LVT

HOSPITAL NAME

Eubank Animal Clinic

REFERRING VET

Dr. Pauly

INVOICE

31899

DATE

7/18/23

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the recent syncope is likely due to acute hemorrhage from a right atrial mass. Moderate volume pericardial effusion is seen in this exam, although clear evidence of tamponade is not appreciated. The patient also has severe chronic degenerative valve disease with severe mitral regurgitation, which is certainly not helping this patient's suffering cardiac output. Severe LA dilation suggests there is high risk for progression to CHF in the future and follow up is advised.

The ECG is largely unremarkable with occasional APCs. Given atrial dilation in a patient in crisis, these are not surprising. No treatment is recommended at this time.

The two most common causes of pericardial effusion in older dogs are idiopathic and neoplastic. Less commonly, pericarditis (an inflammatory condition), a left atrial tear, or a bleeding disorder should also be considered. Idiopathic by definition means that a cause cannot be found. If diagnosed (a rule out diagnosis), the long-term prognosis with idiopathic effusion has the potential to be fair.

Regarding neoplasia, the most common types of cardiac cancer-causing pericardial effusion include hemangiosarcoma (HSA), chemodectoma, or mesothelioma. The prognosis varies a great deal depending on the underlying type of cancer. Based on the findings of today's echocardiogram, **the diagnosis is hemangiosarcoma until proven otherwise. Cardiac HSA carries a poor to grave prognosis, with most dogs succumbing within months. This case is complicated by severe structural disease as well, and it should be noted that our goal is to stabilize the situation for the short term.**

Even without tamponade seen here, **highly recommend a pericardiocentesis in this case**, due to reported syncope. The combination of issues is likely leading to its genesis and to at least relieve pericardial pressure will helpfully stabilize the situation. Due to concurrent CVD and atrial dilation, Pimobendan is recommended for long term benefit in this case. For the effusion, over the counter herbal supplement Yunnan Baiyao (aka Yunnan Paiyao) may help decrease risk of bleeding, however true benefit is speculative (1 capsule PO BID). Please monitor at home for signs of recurrent pericardial effusion including pale gums, difficulty breathing, lethargy/collapse, exercise intolerance, abdominal distention, vomiting, and/or inappetence. If you notice any of these symptoms, patient should be evaluated immediately by a veterinarian. Patient has high risk for acute collapse and sudden death, and this should be expressed to the owner.

Recommend full systemic evaluation including a full AUS and lab work to screen for/confirm likely metastasis. Going forward, consider consultation with an Oncologist.

PLAN

Highly recommended pericardiocentesis given reported syncope. Institute Pimobendan 0.3mg/kg PO q12h. Consider Yunnan Baiyao as discussed. Consider consultation with an Oncologist, full systemic screening as discussed.

A recheck echocardiogram should be performed in 1-2 months to reassess tumor size, sooner if recurrence of clinical signs.



PATIENT

Charley Bencoe

SPECIES

Canine

BREED

Miniature Poodle

SEX

Female Spayed

AGE

11 years

WEIGHT

13.2lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Dana Alterman,
RDCS, LVT

HOSPITAL NAME

Eubank Animal Clinic

REFERRING VET

Dr. Pauly

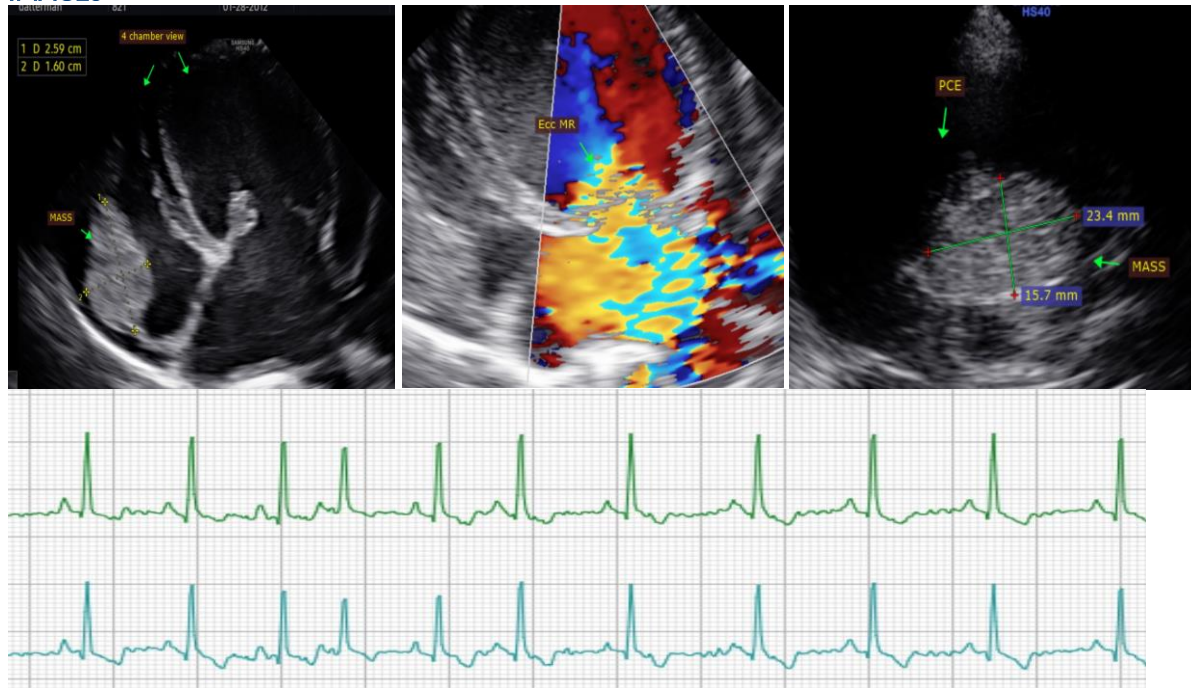
INVOICE

31899

DATE

7/18/23

IMAGES



The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com